

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G/A

INFORMATION TO BE INCLUDED IN STATEMENTS PURSUANT TO RULES 13d-1(b),(c) AND (d) AND
AMENDMENTS THERETO FILED PURSUANT TO 13d-2 UNDER THE SECURITIES EXCHANGE ACT OF 1934*

(Amendment No. 2)

aTyr Pharma, Inc.
(Name of Issuer)

Common stock, par value \$0.001 per share
(Title of Class of Securities)

002120103
(CUSIP Number)

December 31, 2018
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1	NAME OF REPORTING PERSON S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) Viking Global Investors LP		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3	SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0	
	6	SHARED VOTING POWER 3,006,300*	
	7	SOLE DISPOSITIVE POWER 0	
	8	SHARED DISPOSITIVE POWER 3,006,300*	
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,006,300*		
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.5%*		
12	TYPE OF REPORTING PERSON PN		

* See Item 4

1	NAME OF REPORTING PERSON S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) Viking Global Opportunities GP LLC		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3	SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0	
	6	SHARED VOTING POWER 3,006,300*	
	7	SOLE DISPOSITIVE POWER 0	
	8	SHARED DISPOSITIVE POWER 3,006,300*	
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,006,300*		
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.5%*		
12	TYPE OF REPORTING PERSON OO		

* See Item 4

1	NAME OF REPORTING PERSON S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) Viking Global Opportunities Portfolio GP LLC		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3	SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0	
	6	SHARED VOTING POWER 3,006,300*	
	7	SOLE DISPOSITIVE POWER 0	
	8	SHARED DISPOSITIVE POWER 3,006,300*	
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,006,300*		
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.5%*		
12	TYPE OF REPORTING PERSON OO		

* See Item 4

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) Viking Global Opportunities Illiquid Investments Sub-Master LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 3,006,300*
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 3,006,300*
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,006,300*	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.5%*	
12	TYPE OF REPORTING PERSON* PN	

* See Item 4

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) O. Andreas Halvorsen		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3	SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION Norway		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0	
	6	SHARED VOTING POWER 3,006,300*	
	7	SOLE DISPOSITIVE POWER 0	
	8	SHARED DISPOSITIVE POWER 3,006,300*	
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,006,300*		
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.5%*		
12	TYPE OF REPORTING PERSON* IN		

* See Item 4

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) David C. Ott		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3	SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0	
	6	SHARED VOTING POWER 3,006,300*	
	7	SOLE DISPOSITIVE POWER 0	
	8	SHARED DISPOSITIVE POWER 3,006,300*	
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,006,300*		
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.5%*		
12	TYPE OF REPORTING PERSON* IN		

* See Item 4

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) Rose S. Shabet		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>		
3	SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0	
	6	SHARED VOTING POWER 3,006,300*	
	7	SOLE DISPOSITIVE POWER 0	
	8	SHARED DISPOSITIVE POWER 3,006,300*	
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 3,006,300*		
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 9.5%*		
12	TYPE OF REPORTING PERSON* IN		

* See Item 4

Item 1(a). Name of Issuer:

aTyr Pharma, Inc.

Item 1(b). Address of Issuer's Principal Executive Offices:

3545 John Hopkins Court, Suite #250
San Diego, California 92121

Item 2(a). Name of Person Filing:

Viking Global Investors LP ("VGI"),
Viking Global Opportunities GP LLC ("Opportunities GP"),
Viking Global Opportunities Portfolio GP LLC ("Opportunities Portfolio GP"),
Viking Global Opportunities Illiquid Investments Sub-Master LP ("VGOP"),
O. Andreas Halvorsen, David C. Ott and Rose S. Shabet (collectively, the "Reporting Persons")

Items 2(b). Address of Principal Business Office or, if none, Residence:

The business address of each of the Reporting Persons is: 55 Railroad Avenue, Greenwich, Connecticut 06830.

Items 2(c). Citizenship:

VGI is a Delaware limited partnership; Opportunities GP and Opportunities Portfolio GP are Delaware limited liability companies; VGOP is a Cayman Islands exempted limited partnership; O. Andreas Halvorsen is a citizen of Norway; and David C. Ott and Rose S. Shabet are citizens of the United States.

Item 2(d). Titles of Classes of Securities:

Common stock, par value \$0.001 per share ("Common Stock")

Item 2(e). CUSIP NUMBER: 002120103

Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:

- (a) Broker or dealer registered under Section 15 of the Exchange Act
- (b) Bank as defined in Section 3(a)(6) of the Exchange Act
- (c) Insurance company as defined in Section 3(a)(19) of the Exchange Act
- (d) Investment company registered under Section 8 of the Investment Company Act of 1940

- (e) Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940: see Rule 13d-1(b)(1)(ii)(E)
- (f) Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see Rule 13d-1(b)(1)(ii)(F)
- (g) Parent holding company, in accordance with Rule 13d-1(b)(1)(ii)(G).
- (h) Savings Association as defined in Section 3(b) of the Federal Deposit Insurance Act.
- (i) Church Plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act of 1940.
- (j) Non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J), please specify the type of institution:
- (k) Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

A. VGI

- (a) Amount beneficially owned: 3,006,300
- (b) Percent of Class: 9.5%
- (c) Number of shares as to which such person has:
 - (i) Sole power to vote or to direct the vote: 0
 - (ii) Shared power to vote or to direct the vote: 3,006,300
 - (iii) Sole power to dispose or to direct the disposition of: 0
 - (iv) Shared power to dispose or to direct the disposition of: 3,006,300

VGI provides managerial services to VGOP. VGI has the authority to dispose of and vote the shares of Common Stock.

Based on Rule 13d-3 of the Securities Exchange Act of 1934, as amended (the "Act"), VGI may be deemed to beneficially own the shares of Common Stock directly held by VGOP. VGI does not directly own any shares of Common Stock.

VGI beneficially owns 3,006,300 shares of Common Stock consisting of (i) 1,384,300 shares of Common Stock directly and beneficially owned by VGOP and (ii) 1,622,000 shares of Common Stock underlying Class X Preferred

Stock, par value \$0.001 per share (the "Preferred Stock") directly and beneficially owned by VGOP.

B. Opportunities GP

- (a) Amount beneficially owned: 3,006,300
- (b) Percent of Class: 9.5%
- (c) Number of shares as to which such person has:
 - (i) Sole power to vote or to direct the vote: 0
 - (ii) Shared power to vote or to direct the vote: 3,006,300
 - (iii) Sole power to dispose or to direct the disposition of: 0
 - (iv) Shared power to dispose or to direct the disposition of: 3,006,300

Opportunities GP serves as the sole member of Opportunities Portfolio GP and has the authority to dispose of and vote the shares of Common Stock controlled by Opportunities Portfolio GP, which consists of the shares of Common Stock directly held by VGOP. Opportunities GP does not directly own any shares of Common Stock.

Based on Rule 13d-3 of the Act, Opportunities GP may be deemed to beneficially own the shares of Common Stock controlled by Opportunities Portfolio GP, which consists of the shares of Common Stock directly held by VGOP.

Opportunities GP beneficially owns 3,006,300 shares of Common Stock consisting of (i) 1,384,300 shares of Common Stock directly and beneficially owned by VGOP and (ii) 1,622,000 shares of Common Stock underlying the Preferred Stock directly and beneficially owned by VGOP.

C. Opportunities Portfolio GP

- (a) Amount beneficially owned: 3,006,300
- (b) Percent of Class: 9.5%
- (c) Number of shares as to which such person has:
 - (i) Sole power to vote or to direct the vote: 0
 - (ii) Shared power to vote or to direct the vote: 3,006,300
 - (iii) Sole power to dispose or to direct the disposition of: 0
 - (iv) Shared power to dispose or to direct the disposition of: 3,006,300

Opportunities Portfolio GP serves as the general partner of VGOP and has the authority to dispose of and vote the shares of Common Stock directly owned

by VGOP. Opportunities Portfolio GP does not directly own any shares of Common Stock.

Based on Rule 13d-3 of the Act, Opportunities Portfolio GP may be deemed to beneficially own the shares of Common Stock directly held by VGOP.

Opportunities Portfolio GP beneficially owns 3,006,300 shares of Common Stock consisting of (i) 1,384,300 shares of Common Stock directly and beneficially owned by VGOP and (ii) 1,622,000 shares of Common Stock underlying the Preferred Stock directly and beneficially owned by VGOP.

D. VGOP

- (a) Amount beneficially owned: 3,006,300
- (b) Percent of Class: 9.5%
- (c) Number of shares as to which such person has:
 - (i) Sole power to vote or to direct the vote: 0
 - (ii) Shared power to vote or to direct the vote: 3,006,300
 - (iii) Sole power to dispose or to direct the disposition of: 0
 - (iv) Shared power to dispose or to direct the disposition of: 3,006,300

VGOP has the authority to dispose of and vote the shares of Common Stock directly owned by it, which power may be exercised by its general partner, Opportunities Portfolio GP, and by VGI, an affiliate of Opportunities Portfolio GP, which provides managerial services to VGOP. Viking Global Opportunities LP (a Delaware limited partnership) and Viking Global Opportunities III LP (a Cayman Islands exempted limited partnership), through its investment in Viking Global Opportunities Intermediate LP (a Cayman Islands exempted limited partnership), invest substantially all of their assets in Viking Global Opportunities Master LP (a Cayman Islands exempted limited partnership), which in turn invests through VGOP.

VGOP directly and beneficially owns 3,006,300 shares of Common Stock consisting of (i) 1,384,300 shares of Common Stock directly and beneficially owned by VGOP and (ii) 1,622,000 shares of Common Stock underlying the Preferred Stock directly and beneficially owned by VGOP.

E. O. Andreas Halvorsen, David C. Ott and Rose S. Shabet

- (a) Amount beneficially owned: 3,006,300
- (b) Percent of Class: 9.5%
- (c) Number of shares as to which such person has:

- (i) Sole power to vote or to direct the vote: 0
- (ii) Shared power to vote or to direct the vote: 3,006,300
- (iii) Sole power to dispose or to direct the disposition of: 0
- (iv) Shared power to dispose or to direct the disposition of: 3,006,300

Mr. Halvorsen, Mr. Ott and Ms. Shabet, as Executive Committee Members of Viking Global Partners LLC, general partner of VGI and Opportunities GP have shared authority to dispose of and vote the shares of Common Stock beneficially owned by VGI and Opportunities GP. None of Mr. Halvorsen, Mr. Ott and Ms. Shabet directly owns any shares of Common Stock.

Based on Rule 13d-3 of the Act, each may be deemed to beneficially own the shares of Common Stock directly held by VGOP.

Mr. Halvorsen, Mr. Ott and Ms. Shabet each beneficially own 3,006,300 shares of Common Stock consisting of (i) 1,384,300 shares of Common Stock directly and beneficially owned by VGOP and (ii) 1,622,000 shares of Common Stock underlying the Preferred Stock directly and beneficially owned by VGOP.

Excluded from each Reporting Person's beneficial ownership are (i) 9,807,760 shares of Common Stock issuable upon the conversion of shares of Preferred Stock directly owned by VGOP and (ii) 4,952,829 shares of Common Stock issuable upon the exercise of warrants directly owned by VGOP due to a conversion cap that precludes VGOP from converting shares of Preferred Stock and exercising such warrants to the extent that VGOP would, after such conversion or exercise, beneficially own (as determined in accordance with Section 13(d) of the Act) in excess of 9.5% of the shares of Common Stock outstanding (the "Beneficial Ownership Limitation").

The percentage of the class of Common Stock beneficially owned by each Reporting Person is calculated based upon (i) 30,023,543 shares of Common Stock issued and outstanding as of November 8, 2018, as reported by the Issuer in its quarterly report on Form 10-Q filed with the Securities and Exchange Commission (the "Commission") on November 14, 2018 and (ii) the 1,622,000 shares of Common Stock underlying shares of Preferred Stock that could be converted by VGOP without violating the Beneficial Ownership Limitation.

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the Reporting Persons have ceased to be the beneficial owner of more than five percent of the class of securities, check the following [].

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Yes, see Item 4.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.

Not applicable.

Item 8. Identification and Classification of Members of the Group.

Not applicable.

Item 9. Notice of Dissolution of Group.

Not applicable

Item 10. Certification. (if filing pursuant to Rule 13d-1(c))

By signing below each Reporting Person certifies that, to the best of its knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURES

After reasonable inquiry and to the best of our knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct.

Dated: January 10, 2019

/s/ O. ANDREAS HALVORSEN

By: O. Andreas Halvorsen - individually and as an Executive Committee Member of VIKING GLOBAL PARTNERS LLC, on behalf of VIKING GLOBAL INVESTORS LP, and as an Executive Committee Member of VIKING GLOBAL OPPORTUNITIES GP LLC, on behalf of itself and VIKING GLOBAL OPPORTUNITIES PORTFOLIO GP LLC and VIKING GLOBAL OPPORTUNITIES ILLIQUID INVESTMENTS SUB-MASTER LP

/s/ DAVID C. OTT

By: David C. Ott - individually and as an Executive Committee Member of VIKING GLOBAL PARTNERS LLC, on behalf of VIKING GLOBAL INVESTORS LP, and as an Executive Committee Member of VIKING GLOBAL OPPORTUNITIES GP LLC, on behalf of itself and VIKING GLOBAL OPPORTUNITIES PORTFOLIO GP LLC and VIKING GLOBAL OPPORTUNITIES ILLIQUID INVESTMENTS SUB-MASTER LP

/s/ ROSE S. SHABET

By: Rose S. Shabet - individually and as an Executive Committee Member of VIKING GLOBAL PARTNERS LLC, on behalf of VIKING GLOBAL INVESTORS LP, and as an Executive Committee Member of VIKING GLOBAL OPPORTUNITIES GP LLC, on behalf of itself and VIKING GLOBAL OPPORTUNITIES PORTFOLIO GP LLC and VIKING GLOBAL OPPORTUNITIES ILLIQUID INVESTMENTS SUB-MASTER LP

EXHIBIT A - JOINT FILING AGREEMENT

This joint filing agreement is made and entered into as of this 10th day of January, 2019, by and among Viking Global Investors LP, Viking Global Opportunities GP LLC, Viking Global Opportunities Portfolio GP LLC, Viking Global Opportunities Illiquid Investments Sub-Master LP, O. Andreas Halvorsen, David C. Ott and Rose S. Shabet.

The parties hereby agree to jointly prepare and file a Schedule 13G with respect to aTyr Pharma, Inc., as well as any amendments thereto, pursuant to the Securities Exchange Act of 1934, as amended.

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the date first set forth above.

Dated: January 10, 2019

/s/ O. ANDREAS HALVORSEN

By: O. Andreas Halvorsen - individually and as an Executive Committee Member of VIKING GLOBAL PARTNERS LLC, on behalf of VIKING GLOBAL INVESTORS LP, and as an Executive Committee Member of VIKING GLOBAL OPPORTUNITIES GP LLC, on behalf of itself and VIKING GLOBAL OPPORTUNITIES PORTFOLIO GP LLC and VIKING GLOBAL OPPORTUNITIES ILLIQUID INVESTMENTS SUB-MASTER LP

/s/ DAVID C. OTT

By: David C. Ott - individually and as an Executive Committee Member of VIKING GLOBAL PARTNERS LLC, on behalf of VIKING GLOBAL INVESTORS LP, and as an Executive Committee Member of VIKING GLOBAL OPPORTUNITIES GP LLC, on behalf of itself and VIKING GLOBAL OPPORTUNITIES PORTFOLIO GP LLC and VIKING GLOBAL OPPORTUNITIES ILLIQUID INVESTMENTS SUB-MASTER LP

/s/ ROSE S. SHABET

By: Rose S. Shabet - individually and as an Executive Committee Member of VIKING GLOBAL PARTNERS LLC, on behalf of VIKING GLOBAL INVESTORS LP, and as an Executive Committee Member of VIKING GLOBAL OPPORTUNITIES GP LLC, on behalf of itself and VIKING GLOBAL OPPORTUNITIES PORTFOLIO GP LLC and VIKING GLOBAL OPPORTUNITIES ILLIQUID INVESTMENTS SUB-MASTER LP

